



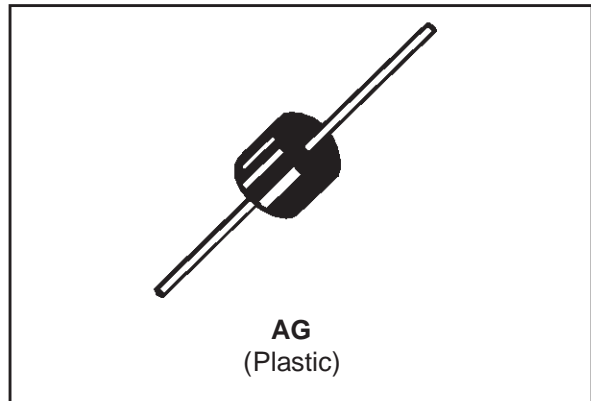
# BY214-400 --->1000

## RECTIFIER DIODES

### MAIN PRODUCTS CHARACTERISTICS

|             |        |
|-------------|--------|
| $I_{F(av)}$ | 6 A    |
| $V_{RRM}$   | 1000 V |
| $V_F(max)$  | 1.2 V  |

- STANDARD RECTIFIER
- HIGH SURGE CURRENT CAPABILITY
- LOW FORWARD VOLTAGE DROP



### ABSOLUTE RATINGS (limiting values)

| Symbol             | Parameter  |                          | Value         | Unit        |
|--------------------|--|--------------------------|---------------|-------------|
| $I_{F(AV)}$        | Average forward current *  | $T_a=90^{\circ}C$        | 6             | A           |
| $I_{FSM}$          | Surge non repetitive forward current                               | $t_p=10ms$<br>sinusoidal | 400           | A           |
| $P_{tot}$          | Power dissipation *  | $T_a=90^{\circ}C$        | 6             | W           |
| $T_{stg}$<br>$T_j$ | Storage and junction temperature range                             |                          | - 65 to + 150 | $^{\circ}C$ |
| $T_L$              | Maximum lead temperature for soldering during 10s at 4mm from case |                          | 230           | $^{\circ}C$ |

\* Single phase, half wave, resistive or inductive load.

| Symbol    | Parameter                       | BY214- |     |     |      | Unit |
|-----------|---------------------------------|--------|-----|-----|------|------|
|           |                                 | 400    | 600 | 800 | 1000 |      |
| $V_{RRM}$ | Repetitive peak reverse voltage | 400    | 600 | 800 | 1000 | V    |

### THERMAL RESISTANCE

| Symbol        | Parameter          | Value | Unit          |
|---------------|--------------------|-------|---------------|
| $R_{th(j-a)}$ | Junction ambient * | 10    | $^{\circ}C/W$ |

\* On infinite heatsink with 10mm lead length

**ELECTRICAL CHARACTERISTICS**

| Symbol   | Test Conditions           |                     | Min. | Typ. | Max. | Unit          |
|----------|---------------------------|---------------------|------|------|------|---------------|
| $V_F$ *  | $T_j = 25^\circ\text{C}$  | $I_F = 20\text{ A}$ |      |      | 1.2  | V             |
| $I_R$ ** | $T_j = 100^\circ\text{C}$ | $V_R = V_{RRM}$     |      |      | 250  | $\mu\text{A}$ |

Pulse test : \*  $t_p = 380\ \mu\text{s}$ , duty cycle < 2 %  
 \*\*  $t_p = 5\ \text{ms}$ , duty cycle < 2 %

**PACKAGE MECHANICAL DATA**

AG (Plastic)

| REF.            | DIMENSIONS  |      |        |       | NOTES   |
|-----------------|-------------|------|--------|-------|---|
|                 | Millimeters |      | Inches |       |   |
|                 | Min.        | Max. | Min.   | Max.  |   |
| A               |             | 9    |        | 0.354 | 1- The lead is not controlled within zone L1.<br>2- The minimum axial length within which the device may be placed bent at right angles is 0.79" (20 mm). |
| B               | 20          |      | 0.787  |       |   |
| $\varnothing C$ |             | 8    |        | 0.315 |   |
| $\varnothing D$ | 1.35        | 1.45 | 0.053  | 0.057 |   |
| L1              |             | 1.27 |        | 0.050 |   |

Marking : Type number  
 Weight : 2.16 g

Information furnished is believed to be accurate and reliable. However, STMicroelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of STMicroelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. STMicroelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of STMicroelectronics.

The ST logo is a registered trademark of STMicroelectronics

© 1998 STMicroelectronics - Printed in Italy - All rights reserved.

STMicroelectronics GROUP OF COMPANIES

Australia - Brazil - Canada - China - France - Germany - Italy - Japan - Korea - Malaysia - Malta - Mexico - Morocco - The Netherlands - Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A.